ABSTRACT OF THE DISCLOSURE

Data synchronization detection means 3 is provided between data identification means 1 and code demodulation means 6 of the data reproduction system, which performs data synchronization detection using the code-modulated data itself; a specified bit pattern generated in the data codeword is calculated in each phase (bit), using a specified bit sequence pattern that is not generated in a specified phase of the data codeword, by the conversion law during code modulation (or there is a specified bit sequence pattern that is generated only in a specified phase of the codeword); the positions of the data codeword partitions are thereby identified. Scrambling is then applied to the write data as required in order to ensure accurate synchronization detection. In addition, the data position is specified by detecting the pattern correlation between the PLO_SYNC section and GAP section. Thanks to this arrangement, a sector format can be employed constituted by PLO_SYNC, DATA, ECC and GAP, without a data synchronization signal.